AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. Canceled

2. (Currently Amended) ~~The~~ A DC bias control circuit ~~according to Claim 1~~ for controlling a DC bias, comprising:

a HIGH level detector for detecting a HIGH level of ~~the~~ an output signal from ~~the amplifier~~ a preamplifier;

a DC level detector for detecting a DC level of the output signal from the ~~amplifier~~ preamplifier;

a LOW level detector for detecting a LOW level of the output signal from the ~~amplifier~~ preamplifier;

a first ~~subtracting circuit for determining~~ subtractor for finding a first ~~subtraction~~ subtracted result by subtracting the DC level from the HIGH level;

a second ~~subtracting circuit for determining~~ subtractor for finding a second ~~subtraction~~ subtracted result by subtracting the LOW level from the DC level;

a third ~~subtracting circuit for determining~~ subtractor for finding a third ~~subtraction~~ subtracted result by subtracting the second ~~subtraction~~ subtracted result from the first ~~subtraction~~ subtracted result; and

a ~~correction~~ compensating circuit for ~~correcting~~ compensating the DC bias by weighting the third ~~subtraction~~ subtracted result ~~according to~~ in correspondence with characteristics of the ~~amplifier~~ preamplifier, and by ~~determining~~ finding a difference between ~~a level of~~ a crossing point ~~of an eye diagram of the output signal from the amplifier~~, at which rising and falling edges of ~~pulses included in~~ the output signal from the ~~amplifier~~ preamplifier ~~cross each other~~ are crossed, and the DC level.

3. (Currently Amended) An optical receiver comprising:

a light receiving element for converting an incoming optical signal into an electrical current signal;

a preamplifier for converting the electrical current signal ~~which flows through~~ from the light receiving element into a voltage ~~signal~~; ~~and~~

a DC bias control circuit for controlling a DC bias in accordance with the voltage from the preamplifier; and

a data regeneration and clock recovery circuit for ~~applying a DC bias to an AC component of the voltage signal from the preamplifier, and for reshaping and~~ regenerating data and recovering a clock from ~~the~~ an AC component of the voltage from the preamplifier based on ~~a predetermined threshold voltage~~ the DC bias controlled by the DC bias control circuit.

~~wherein said optical receiver controls the DC bias based on a HIGH level, a DC level, and a LOW level of the output signal from the preamplifier.~~

4. (Currently Amended) The optical receiver according to Claim 3, wherein the DC bias control circuit comprises:

a HIGH level detector for detecting a HIGH level of the ~~output signal~~ voltage from the preamplifier;

a DC level detector for detecting a DC level of the ~~output signal~~ voltage from the preamplifier;

a LOW level detector for detecting a LOW level of the ~~output signal~~ voltage from the preamplifier;

a first subtracting circuit for determining a first subtraction result by subtracting the DC level from the HIGH level;

a second subtracting circuit for determining a second subtraction result by subtracting the LOW level from the DC level;

a third subtracting circuit for determining a third subtraction result by subtracting the second subtraction result from the first subtraction result; and

a correction circuit for correcting the DC bias by weighting the third subtraction result according to characteristics of the light receiving element and characteristics of the ~~amplifier~~ preamplifier, and by determining a difference between a level of a crossing point of an eye diagram of the output signal from the preamplifier, at which rising and falling edges of pulses included in the output signal from the preamplifier cross each other, and the DC level.

5. (Currently Amended) A method of controlling a DC bias ~~added to an AC component of an output signal delivered from an amplifier to a data regeneration circuit that regenerates data from the AC component of the output signal from the amplifier based on a predetermined threshold voltage~~, the method comprising the steps of:

detecting a HIGH level of ~~the~~ an output signal from ~~the amplifier~~ a preamplifier;

detecting a DC level of the output signal from the ~~amplifier~~ preamplifier;

detecting a LOW level of the output signal from the ~~amplifier~~ preamplifier;

~~determining~~ finding a first ~~subtraction~~ subtracted result by subtracting the DC level from the HIGH level;

~~determining~~ finding a second ~~subtraction~~ subtracted result by subtracting the LOW level from the DC level;

~~determining~~ finding a third ~~subtraction~~ subtracted result by subtracting the second ~~subtraction~~ subtracted result from the first ~~subtraction~~ subtracted result; and

~~correcting~~ compensating the DC bias by weighting the third ~~subtraction~~ subtracted result ~~according to~~ in accordance with characteristics of the ~~amplifier~~ preamplifier, and by ~~determining~~ finding a difference between a level of a crossing point of an eye diagram of the output signal from the ~~amplifier~~ preamplifier, at which ~~rising~~ leading and ~~falling~~ trailing edges of pulses included in the output signal from the ~~amplifier~~ preamplifier cross each other, and the DC level.

6. (New) An optical receiver comprising:

a light receiving element for converting an incoming optical signal into an electrical current signal;

a preamplifier for converting the electrical current signal from the light receiving element into a voltage;

a DC bias control circuit for controlling a DC bias in accordance with the voltage from the preamplifier; and

a data regeneration circuit for regenerating data from an AC component of the voltage from the preamplifier based on the DC bias controlled by the DC bias control circuit.